AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1-19. (canceled).

20. (currently amended): A device comprising a non-mechanical self-assembled monolayer surface with enhanced cell-adhesive properties, said surface comprising;

a) a polymeric matrix;

b) at least one oxygen-sensing compound, wherein said at least one oxygen-sensing compound is present within said polymeric matrix;

c) ~~a non-mechanical self-assembled monolayer comprising~~ at least one reactive group, wherein said at least one reactive group is exposed on the surface of said polymeric matrix; and

d) at least one cell-adhesive molecule coupled to said non-mechanical self-assembled monolayer via said at least one reactive group.

21. (previously presented): The device of claim 20, wherein said at least one reactive group comprises a reactive group selected from the group consisting of: a carboxyl group, a hydroxyl group, an amide, an amino, an acyl group, an ester, an epoxy, a silane, a silanol, an aldehyde, and a sulfhydryl group

22. (previously presented) The device of claim 21, wherein said reactive group is a hydroxyl group.

23. (previously presented) The device of claim 20, wherein said polymeric matrix comprises silicone.

24. (previously presented) The device of claim 23, wherein said silicone is polydimethyl siloxane (PDMS).

25. (previously presented) The device of claim 20, wherein said oxygen-sensing compound is luminescent.

26. (previously presented) The device of claim 20, wherein said at least one cell-adhesive molecule is selected from the group consisting of: a protein, a protein fragment, a polypeptide, an oligopeptide, an amino acid, a proteoglycan, a glycoprotein, a lipoprotein, a carbohydrate, a disaccharide, a polysaccharide, a nucleic acid, an oligonucleotide, a polynucleotide, a synthetic polymer, a natural polymer and combinations thereof.

27. (previously presented) The device of claim 20, wherein said at least one cell-adhesive molecule is selected from the group consisting of an extracellular matrix molecule, a growth factor, and an antibody.